B2 concl'd

film, a magnetic thin film, etc., and includes methods such as wet-chemical etching method, argon ion milling method, and reactive ion etching method. Among these etching methods, reactive ion etching method is a kind of dry etching method, and is advantageous in that it enables a most precise transfer of patterns produced by lithography, and that it is suitable for fine processing. Moreover, it boasts superior etching rate. In view of such advantages, numerous large integrated circuits and semiconductor memories are fabricated by the reactive-ion etching method.

Page 2, please replace the paragraphs spanning line 14 through page 3, line 16, with the following rewritten paragraphs:

B3

In case of reactive-ion etching, firstly, the chemically active species such as the ions or radicals of the reactive gases that are generated in the plasma are adsorbed onto the surface of the work piece and undergo chemical reaction to form a layer of chemical products having a low bonding energy. Since the surface of the work piece are exposed to the impact of the positive ions that are accelerated in the plasma by an electric field and which are vertically incident to the surface, the surface layers that are loosely bonded are successively stripped off by the sputtering of ions or by the evaporation into vacuum. In this context, the reactive-ion etching process can be regarded as a process in which a chemical reaction and a physical process proceed simultaneously, and it is characterized by having a selectivity on a specific substance and having anisotropy as such to cut vertically into the surface of the object.

However, despite the superiority of the reactive-ion etching method over other methods, no effective means has been found for etching copper or gold that are widely used in the electronics, or for silver that is used in abundance as a heat conductive material or an electric contact material. The reason for this is that copper, silver, and gold undergo reaction with various types of etching gases such as CF_4, CCl_4, CCl_2F_2, $CClF_3$, $CBrF_3$, Cl_2, C_2F_6, C_3F_8, C_4F_{10}, CHF_3, C_2H_2, SF_6, SiF_4, BCl_3, PCl_3, $SiCl_4$, HCl, $CHClF_2$, etc., which are developed for etching semiconductor materials, and form reaction products with a bonding energy far higher than semiconducting materials. Thus, the reaction products are less apt to be subjected to a sputtering or an evaporation, and cannot be removed in a plasma.

Page 4, please replace the paragraphs spanning line 9 through page 5, line 1, with the following rewritten paragraphs:

According to the invention of the present application, the above problems are solved by providing a dry-etching method comprising etching a metallic surface of copper, silver, gold, or an alloy containing as a main component at least one of these metals by plasma of an etching gas containing at least nitrogen oxide while being reacted with the plasma.

B4

Furthermore, the invention of the present application provides, as a preferred embodiment, a dry-etching method in which the etching gas is a mixed gas of nitrogen oxide and hydrogen or a hydrogen-containing compound; in which the hydrogen-containing compound is one type or two or more types of compounds selected from the group consisting of ammonia, hydrocarbons, halogen-containing hydrocarbons, or hydrogen sulfide; and the mask material to be used in covering the metallic surface on etching is the one selected from the group consisting of titanium, titanium alloys, aluminum, or aluminum alloys.

Page 5, please replace the paragraph spanning line 13 through page 6, line 3, with the following rewritten paragraph:

The numerals shown in the figures each represent the following:

B5

1	Glass substrate or a dielectric substrate
2	Metallic thin film
3	Resist
4	Mask
5	Reaction vessel
6	Deposition protection plate
7	High frequency electrode
8	Sample holder
9	Zero-potential shield
10	Counter electrode
11	Etching gas inlet
12	Etching gas
13	High voltage radio frequency power supply